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Ruchi D. Kapoor

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CAMPBELL STEPHENSON ASCOLESE, LLP
4807 SPICEWOOD SPRINGS RD.
BLDG. 4, SUITE 201
AUSTIN, TX 78759

EXAMINER

MOORE, IAN N

ART UNIT

PAPER NUMBER

2661

5

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/779,248

Applicant(s)

KAPOOR ET AL.

Examiner

Ian N Moore

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: **Sample Netflow for network traffic data collection.**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 9-12, 16-19 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hegde (U.S. 6,570,875) in view of McKee (U.S. 5,539,659).

Regarding claims 1, 9 and 16, Hegde'875 discloses a network node (see **FIG. 2, Multiprotocol Switch 40**) for collecting network traffic data having one or more processing engines (see **FIG. 2, CPU 80**) and a memory (see **FIG. 2, Shared Memory 90**) comprising a set of instructions to:

receive a group of information (see **FIG. 2, Input/output ports 50 receive IP packet**; see col. 4, lines 34-53, see **FIG. 7, S30 and S32**; see col. 8, lines 250 to col. 9, lines 390);

determine whether to process the group of information for network data collection (see **FIG. 8, S42, S44**; see col. 2, lines 65 to col. 3, lines 9; see col. 9, lines 40-55; note that

IP header is extracted and determined if the flow (i.e. source and destination) is in the flow table for updating/creating the new forwarding information in the flow table 70 (also see FIG. 5));

process the group of information for network data collection if the determination is to process the group of information (see FIG. 9, S72, S94; see col. 3, lines 3-5, see col. 10, lines 36-44, see col. 11, lines 65 to col. 12, lines 5; note that the new forwarding information is created in the flow table when the flow from extracted IP header is not in the flow table; also see FIG. 10 for recording/collecting the entries in the flow table); and

forward the group of information to the destination (see FIG. 8, S46, S50; see col. 3, line 4-10, see col. 10, lines 24-32; note that once the flow is identified and the address is resolved, the IP packet is forwarded according to the designated flow);

Hegde'875 does not explicitly disclose collection according to a sample algorithm.

However, the above-mentioned claimed limitations are taught by McKee'659. In particular, McKee'659 teaches network data collection according to a sample algorithm (see FIG. 6, a method/algorithm which collects network traffic data (i.e. a monitoring system which randomly collects the traffic data from the sample packets, thus, it is a sample method); see col. 1, lines 13-24, see col. 2, lines 67 to col. 3, lines 16).

In view of this, having the system of Hegde'875 and then given the teaching of McKee'659, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hegde'875, for the purpose of providing a network data monitoring and collection method on sample packets, as taught by McKee'659, since McKee'659 states the advantages/benefits at col. 3, lines 5-39 that it would facilitate the

identification of significant data items relevant to management of a network. The motivation being that by monitoring and collection data, it can increase the network performance since the system is able to collect data regarding the network and path configuration, provisioning, routing, forwarding for future use, and to identify any potential problems in the network.

Regarding claims 2, 10, 17 and 24, Hegde'875 discloses wherein the group of information is an IP packet (see FIG. 2, IP packet; see col. 4, lines 34-53, see FIG. 7, S32; IP packet see col. 8, lines 250 to col. 9, lines 390).

Regarding claims 3, 11, 18 and 25, McKee'659 discloses wherein the sample algorithm is selected from one of linear, exponential, natural log, burst, and traffic attribute (see FIG. 6, a method/algorithm which collects network traffic attributes/data (i.e. a monitoring system which randomly collects the traffic data from the sample packets, thus, it is a sample method); see col. 1, lines 13-24, see col. 2, lines 67 to col. 3, lines 16).

In view of this, having the system of Hegde'875 and then given the teaching of McKee'659, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hegde'875, for the purpose of providing a network data monitoring and collection method on sample packets, as taught by McKee'659, for the same purpose and motivation as described in claims 1,9,16 and 23.

Regarding claims 4, 12, 19 and 26, the combined system of Hegde'875 and McKee'659 discloses wherein forwarding the group of information to the destination as described in claims 1,9,16 and 23.

Hegde'875 further discloses identifying the destination (see FIG. 8, S44, an entry of a flow) using a forwarding table (see FIG. 2 and FIG. 5, Flow Table 70; see col. 2, lines 65 to col. 3, lines 9; see col. 9, lines 40-55; note that IP header is extracted and determined if the flow entry is in the flow table);

if the destination is in the forwarding table (see FIG. 8, S46; the entries in the flow table is Yes), automatically forwarding the group of information to the destination (see FIG. 8, S46; note that the packet is forwarded according to a flow in the flow table at wire speed; see col. 3, lines 6-7; col. 9, lines 50-55) and

otherwise sending the group of information to one or more processing engines to determine routing to the destination (see FIG. 8, S56; Forwarded to CPU for processing; col. 3, lines 2-6; note that when there is no entry of a flow in the flow table, the packet is forwarded to CPU to be processed. See FIG. 9, S88, S90, S94; the CPU determines and creates/updates the table with new forwarding information; see FIG. 9, S72, S94; see col. 3, lines 3-5, see col. 10, lines 36-44, see col. 11, lines 65 to col. 12, lines 5) and

forwarding the group of information according to the determined routing (see FIG. 8, S46, S50; see col. 3, line 4-10, see col. 10, lines 24-32; note that once the flow is identified and the address is resolved, the IP packet is forwarded according to the created/updated designated flow).

Regarding claim 5, Hegde'875 discloses wherein forwarding the group of information to the destination (see FIG. 8, S46; forwarding packet according to the flow table) is performed after processing the group of information (see FIG. 8, S40, S42 and S44; getting, checking and determining the IP packet for a flow; see col. 9, lines 44-49; note that forwarding IP packet according to the designated step is executed after the step of processing IP packet for a flow information is performed).

3. Claim 6, 13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hegde'875 and McKee'659, as applied to claims 1,9 and 16 above, and further in view of Dietz (U.S. 6,651,099).

Regarding claim 6, 13 and 20, Hegde'875 discloses determining if the group of information is part of one or more recorded traffic flows (see FIG. 8, S42, S44; see col. 2, lines 65 to col. 3, lines 9; see col. 9, lines 40-55; note that IP header is extracted and determined if the traffic flow is in the flow table);

creating a new entry in a table if the group of information is not part of the one or more recorded traffic flows (see FIG. 8, S56; Forwarded to CPU for processing; col. 3, lines 2-6; note that when there is no entry of a flow in the flow table, the packet is forwarded to CPU to be processed. See FIG. 9, S88, S90, S94; the CPU updates the table with a new traffic flow; see FIG. 9, S72, S94; see col. 3, lines 3-5, see col. 10, lines 36-44, see col. 11, lines 65 to col. 12, lines 5);

forwarding if the group of information is part of the one or more recorded traffic flows (see FIG. 8, S46, S50; see FIG. 12, S176; see col. 3, line 4-10, see col. 10, lines 24-

32; note that once the flow is identified and the address is resolved, the IP packet is forwarded according to the created/updated designated flow).

Neither Hegde'875 nor McKee'659 explicitly disclose incrementing a field in an existing entry in the table; and time stamping the group of information.

However, the above-mentioned claimed limitations are taught by Dietz'099. In particular, Dietz'099 teaches incrementing a field (**see col. 24, lines 55-56, see col. 14, lines 54-56; a packet count in the counters, and note that when counting, the data must be incremented**) in an existing entry in the table (**see FIG. 3, Flow entry database**) if the group of information is part of the one or more recorded traffic flows (see FIG. 3, steps 316 and 322; see col. 14, lines 3-35, 48-57; see col. 24, lines 50-59; note that when the packet is found to have a match flow-entry in the database 324, the calculator enters the measured statistical data in the flow-entry); and

time stamping the group of information (**see col. 20, line 40-65; note that the time stamps are generated, collected, and analyzed for each packet of the flow**).

In view of this, having the combined system of Hegde'875 and McKee'659, then given the teaching of Dietz'099, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Hegde'875 and McKee'659, for the purpose of providing a mechanism of collecting traffic flows in the flow-entry database by utilizing counters, and time stamping the packet, as taught by Dietz'099, since Dietz'099 states the advantages/benefits at col. 4, lines 40 to col. 5, lines 10 that it would recognize and classify all flows that pass either direction of the network and tune the performance of the network. The motivation being that by collection the traffic flow

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information, it enhance the performance of the network since the resources are being monitored and occurrences of specific sequences of packets are being reported.

4. Claim 7,8,14,15,21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hegde'875, McKee'659 and Dietz'099, as applied to claim 6 above, and further in view of Takase (U.S. 5,822,535).

Regarding claim 7, 14 and 21, the combined system of Hegde'875, McKee'659 and Dietz'099 discloses the processing of the group of information for network data collection as described above in claims 1 and 6. Hegde'875 further discloses a network traffic data collection application (see FIG. 2, Flow Table 70). Dietz'099 also discloses a network traffic data collection application (see FIG. 11, Lookup/update Engine LUE 1107).

Neither Hegde'875, McKee'659 nor Dietz'099 explicitly disclose creating a traffic information packet; and transmitting the traffic information packet.

However, the above-mentioned claimed limitations are taught by Takase'535. In particular, Takase'535 teaches creating a traffic information packet (**see FIG. 17B, Response Packet; see col. 2, lines 55-61; see col. 20, lines 5-30; see FIG. 7, Steps S5-S7; note that upon receiving the call/request packet 401 from the management node 100, the managed node 301 creates a response packet after collecting and accumulating according to the inquiry**); and

transmitting the traffic information packet to a network traffic data collection application (**see FIG. 2, software application Management system 400 of the**

Management node 100; see FIG. 7, S8; the response packet is transmitted to the software application management system 400; see col. 7, lines 50 to col. 9, lines 6).

In view of this, having the combined system of Hegde'875, McKee'659 and Dietz'099, then given the teaching of Takase'535, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Hegde'875, McKee'659 and Takase'535, for the purpose of providing a mechanism of transmitting a collected response packet to the collection management application system upon inquiry, as taught by Takase'535, since Takase'535 states the advantages/benefits at col. 2, lines 45 to col. 3, lines 40 that it would reduce the amount of traffic flow in the network by preventing concentration of network load. The motivation being that by transmitting collected response packet only upon request to the management software application, it can reduce the network congestion since the collected packet is transmitted only upon request.

Regarding claim 8, 15 and 22, Takase'535 discloses wherein the traffic information packet comprises a header (see FIG. 17B, Protocol Header 171) and one or more flow records (see FIG. 17B, Attribute Value); see col. 20, lines 5-42.

In view of this, having the combined system of Hegde'875, McKee'659 and Dietz'099, then given the teaching of Takase'535, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Hegde'875, McKee'659 and Takase'535, for same purpose as described above in claims 7, 14, and 21.

5. Claims 23 and 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Hegde'875 and McKee'659, and further in view of Hebb (U.S. 6,463,067).

Regarding claim 23, Hegde'875 discloses an apparatus (see **FIG. 2, Multiprotocol Switch 40**) for collecting network traffic data comprising:

one or more route processors (see **FIG. 2, CPU 80**);

one or more switch fabrics (see **FIG. 2, Switch Module 60**) coupled to the one or more route processors (see **FIG. 2, Switch module 60 is connected to CPU 80**);

one or more destination line cards (see **FIG. 1 and 2, transmitting ports of the Input/output ports 50-1...50-N which interface with network nodes, also each port must be on the card**) coupled to the one or more switch fabrics (see **FIG. 2, Input/output ports 50 is connected to Switch Module 60; see col. 4, lines 34-53**);

a source line card (see **FIG. 1 and 2, receiving ports of the Input/output ports 50-1...50-N which interface with network nodes, also each port must be on the card**) coupled to the one or more switch fabrics (see **FIG. 2, Input/output ports 50 is connected to Switch Module 60; see col. 4, lines 34-53**),

wherein the source line card receive a group of information (see **FIG. 2, receiving ports of Input/output ports 50 receive IP packet; see col. 4, lines 34-53, see FIG. 7, S30 and S32; see col. 8, lines 250 to col. 9, lines 390**);

Determine whether to process the group of information for network data collection (see **FIG. 8, S42, S44; see col. 2, lines 65 to col. 3, lines 9; see col. 9, lines 40-55; note that IP header is extracted and determined if the flow (i.e. source and destination) is in the**

flow table for updating/creating the new forwarding information in the flow table 70 (also see FIG. 5));

process the group of information for network data collection if the determination is to process the group of information (see FIG. 9, S72, S94; see col. 3, lines 3-5, see col. 10, lines 36-44, see col. 11, lines 65 to col. 12, lines 5; note that the new forwarding information is created in the flow table when the flow from extracted IP header is not in the flow table; also see FIG. 10 for recording/collecting the entries in the flow table); and

forward the group of information to the destination (see FIG. 8, S46, S50; see col. 3, line 4-10, see col. 10, lines 24-32; note that once the flow is identified and the address is resolved, the IP packet is forwarded to the destination);

Hegde'875 does not explicitly disclose collection according to a sample algorithm.

However, the above-mentioned claimed limitations are taught by McKee'659. In particular, McKee'659 teaches network data collection according to a sample algorithm (see FIG. 6, a method/algorithm which collects network traffic data (i.e. a monitoring system which randomly collects the traffic data from the sample packets, thus, it is a sample method); see col. 1, lines 13-24, see col. 2, lines 67 to col. 3, lines 16).

In view of this, having the system of Hegde'875 and then given the teaching of McKee'659, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Hegde'875, for the purpose of providing a network data monitoring and collection method on sample packets, as taught by McKee'659, since McKee'659 states the advantages/benefits at col. 3, lines 5-39 that it would facilitate the identification of significant data items relevant to management of a network. The motivation

being that by monitoring and collection data, it can increase the network performance since the system is able to collect data regarding the network and path configuration, provisioning, routing, forwarding for future use, and to identify any potential problems in the network.

Neither Hegde'875 nor McKee'659 explicitly discloses the source line card (see **Hebb'067 FIG. 2, a line interface unit PHY 1/O and Framing 20 unit**) process the group of information (see **Hebb'067 FIG. 2, Forwarding Engine 22 within interface card 20 processes the received packets by segmenting and forwarding them toward the switch fabric 16; see cHebb'067 col. 3, lines 55-60**), and

forward the group information to one or more destination line cards (see **McKee'659 FIG. 2, another PHY 1/O and Framing 20 unit; note that a segmented packet is send from switch fabric 16 to outgoing line interface PHY 1/O and Framing 20 unit, and then the received segments are reassembled into packets for outgoing transfers; see col. 3, lines 50-62**).

However, the above-mentioned claimed limitations are taught by Hebb'067. In view of this, having the combined system of Hegde'875 and McKee'659, then given the teaching of Hebb'067, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Hegde'875 and McKee'659, for the purpose of providing processing packets within input line interface unit and sending the processed data to outgoing line interface unit, as taught by Hebb'067, since Hebb'067 states the advantages/benefits at col. 2, lines 25-54 that it would enhance the efficiency and speed of the communication between the packet process and the forwarding engine, and allowing for high-speed packet forwarding and classification. The motivation being that by processing

the packet at the incoming port and forwarding to the switch fabric and the outgoing port, it can increase the performance of the network and enhance the packet classification since the packet is proceed at incoming port before traversing the router.

Regarding claim 27, Hebb'067 discloses wherein the one or more processing engines (see **FIG. 2, Forwarding Engine 22**) is located on the source line card (see Hebb'067 **FIG. 2, a line interface unit PHY 1/O and Framing 20 unit; note that Forwarding Engine 22 within interface card 20; col. 3, lines 55-60**).

In view of this, having the combined system of Hegde'875 and McKee'659, then given the teaching of Hebb'067, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Hegde'875 and McKee'659, for the same purpose as described above in claim 23.

6. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hegde'875, McKee'659 and Hebb'067, as applied to claim 23 above, and further in view of Dietz (U.S. 6,651,099).

Regarding claim 28, Hegde'875 discloses determining if the group of information is part of one or more recorded traffic flows (see **FIG. 8, S42, S44; see col. 2, lines 65 to col. 3, lines 9; see col. 9, lines 40-55; note that IP header is extracted and determined if the traffic flow is in the flow table**);

creating a new entry in a table if the group of information is not part of the one or more recorded traffic flows (see **FIG. 8, S56; Forwarded to CPU for processing; col. 3,**

lines 2-6; note that when there is no entry of a flow in the flow table, the packet is forwarded to CPU to be processed. See FIG. 9, S88, S90, S94; the CPU updates the table with a new traffic flow; see FIG. 9, S72, S94; see col. 3, lines 3-5, see col. 10, lines 36-44, see col. 11, lines 65 to col. 12, lines 5);

forwarding if the group of information is part of the one or more recorded traffic flows (see FIG. 8, S46, S50; see FIG. 12, S176; see col. 3, line 4-10, see col. 10, lines 24-32; **note that once the flow is identified and the address is resolved, the IP packet is forwarded according to the created/updated designated flow).**

Neither Hegde'875 nor McKee'659 explicitly disclose incrementing a field in an existing entry in the table; and time stamping the group of information.

However, the above-mentioned claimed limitations are taught by Dietz'099. In particular, Dietz'099 teaches incrementing a field (see col. 24, lines 55-56, see col. 14, lines 54-56; **a packet count in the counters, and note that when counting, the data must be incremented**) in an existing entry in the table (see FIG. 3, Flow entry database) if the group of information is part of the one or more recorded traffic flows (see FIG. 3, steps 316 and 322; see col. 14, lines 3-35, 48-57; see col. 24, lines 50-59; note that when the packet is found to have a match flow-entry in the database 324, the calculator enters the measured statistical data in the flow-entry); and

time stamping the group of information (see col. 20, line 40-65; **note that the time stamps are generated, collected, and analyzed for each packet of the flow).**

In view of this, having the combined system of Hegde'875 and McKee'659, then given the teaching of Dietz'099, it would have been obvious to one having ordinary skill in

the art at the time the invention was made to modify the combined system of Hegde'875 and McKee'659, for the purpose of providing a mechanism of collecting traffic flows in the flow-entry database by utilizing counters, and time stamping the packet, as taught by Dietz'099, since Dietz'099 states the advantages/benefits at col. 4, lines 40 to col. 5, lines 10 that it would recognize and classify all flows that pass either direction of the network and tune the performance of the network. The motivation being that by collection the traffic flow information, it enhance the performance of the network since the resources are being monitored and occurrences of specific sequences of packets are being reported.

7. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hegde'875, McKee'659, Hebb'067 and Dietz'099, as applied to claim 28 above, and further in view of Takase (U.S. 5,822,535).

Regarding claim 29, the combined system of Hegde'875, McKee'659, Hebb'067 and Dietz'099 discloses the processing of the group of information for network data collection as described above in claims 1 and 6. Hegde'875 further discloses a network traffic data collection application (see FIG. 2, Flow Table 70). Dietz'099 also discloses a network traffic data collection application (see FIG. 11, Lookup/update Engine LUE 1107).

Neither Hegde'875, McKee'659, Hebb'067, nor Dietz'099 explicitly disclose creating a traffic information packet; and transmitting the traffic information packet.

However, the above-mentioned claimed limitations are taught by Takase'535. In particular, Takase'535 teaches creating a traffic information packet (see **FIG. 17B, Response Packet**; see col. 2, lines 55-61; see col. 20, lines 5-30; see **FIG. 7, Steps S5-S7**; note that

upon receiving the call/request packet 401 from the management node 100, the managed node 301 creates a response packet after collecting and accumulating according to the inquiry); and

transmitting the traffic information packet to a network traffic data collection application (see FIG. 2, software application Management system 400 of the Management node 100; see FIG. 7, S8; the response packet is transmitted to the software application management system 400; see col. 7, lines 50 to col. 9, lines 6).

In view of this, having the combined system of Hegde'875, McKee'659, Hebb'067 and Dietz'099, then given the teaching of Takase'535, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Hegde'875, McKee'659, Hebb'067 and Dietz'099, for the purpose of providing a mechanism of transmitting a collected response packet to the collection management application system upon inquiry, as taught by Takase'535, since Takase'535 states the advantages/benefits at col. 2, lines 45 to col. 3, lines 40 that it would reduce the amount of traffic flow in the network by preventing concentration of network load. The motivation being that by transmitting collected response packet only upon request to the management software application, it can reduce the network congestion since the collected packet is transmitted only upon request.

Regarding claim 30, Takase'535 discloses wherein the traffic information packet comprises a header (see FIG. 17B, Protocol Header 171) and one or more flow records (see FIG. 17B, Attribute Value); see col. 20, lines 5-42.

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In view of this, having the combined system of Hegde'875, McKee'659, Hebb'067 and Dietz'099, then given the teaching of Takase'535, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Hegde'875, McKee'659, Hebb'067 and Dietz'099, for same purpose as described above in claims 7, 14, and 21.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 703-605-1531. The examiner can normally be reached on M-F: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on 703-308-7828. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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7/20/04



**KENNETH VANDERPUYE
PRIMARY EXAMINER**